

ATTACHMENT B Amendments to the Claims

Following herewith is a complete listing of the claims, including a marked copy of the currently amended claims.

1. (Currently Amended) An apparatus for detecting and indicating faults on a computer motherboard comprising:

a nonvolatile memory device for storing a plurality of diagnostic instructions for detecting faults on said computer motherboard; and
a microprocessor, coupled to said nonvolatile memory device, for, responsive to receiving an initialization signal, capable of requesting and retrieving a said plurality of diagnostic instructions, said microprocessor and executing said retrieved plurality of the diagnostic instructions so as to detect faults on said computer motherboard when said microprocessor receives an initialization signal; and
~~a nonvolatile memory device having said plurality of diagnostic instructions stored, said plurality diagnostic instructions initializing said computer motherboard; and~~
a visual indicator coupled to and controlled by said microprocessor ~~indicating for providing a visual indication when~~ a fault on said computer motherboard ~~if said computer motherboard is not successfully initialized is detected during execution of said diagnostic instructions by the microprocessor.~~

2. (Original) The apparatus for detecting and indicating faults on a computer motherboard as in claim 1, wherein said visual indicator is turned on when power is applied to said computer motherboard.

3. (Original) The apparatus for detecting and indicating faults on a computer motherboard as in claim 1, wherein said visual indicator is turned off upon detection of a fault on said computer motherboard.

4. (Currently Amended) The apparatus for detecting and indicating faults on a computer motherboard as in claim 1, further comprising a flash circuit ~~activating a flash~~ for flashing said visual indicator upon detection of a fault on a memory subsystem.

5. (Original) The apparatus for detecting and indicating faults on a computer motherboard as in claim 1, wherein said nonvolatile memory device stores power-on self-test diagnostic instructions and basic input and output system instructions.

6. (Original) The apparatus for detecting and indicating faults on a computer motherboard as in claim 1 wherein said visual indicator is a light emitting diode.

7. (Original) The apparatus for detecting and indicating faults on a computer motherboard as in claim 1 wherein said visual indicator is an external visual indicator.

8. (Original) The apparatus for detecting and indicating faults on a computer motherboard as in claim 1 wherein said visual indicator is an internal visual indicator.

9. (Original) The apparatus for detecting and indicating faults on a computer motherboard as in claim 7, further comprising an I/O port coupled to said microprocessor, said microprocessor providing signals to said external visual indicator via said I/O port.

10. (Original) The apparatus for detecting and indicating faults on a computer motherboard as in claim 1, wherein said computer motherboard includes integrated circuits mounted on said computer motherboard.

11. (Currently Amended) A method for detecting and indicating that there are no faults on a computer motherboard comprising the steps of:

storing in a nonvolatile memory device a plurality of diagnostic instructions for detecting faults on said computer motherboard;
receiving an initialization signal to start a computer system;
turning on a visual indicator when power is applied to said computer motherboard;
requesting and retrieving a plurality of said diagnostic instructions, and executing said diagnostic instructions so as to detect faults on said computer motherboard,
~~stored a nonvolatile memory device upon responsive to~~ reception of ~~an~~ said initialization signal;
~~retrieving said plurality of diagnostic instructions;~~
~~initializing said computer motherboard by executing said retrieved plurality of diagnostic instructions; and~~
turning off said visual indicator when no faults on said computer motherboard ~~is successfully initialized~~ are detected during execution of said diagnostic instructions.

12. (Currently Amended) The method for detecting and indicating faults on a computer motherboard as in claim 11, further comprising the steps of:

initializing a memory subsystem; and
~~activating a flash~~ flashing said visual indicator when a fault is found on said memory subsystem.

13. (Original) The method for detecting and indicating faults on a computer motherboard as in claim 11, wherein said nonvolatile memory device stores power-on self-test diagnostic instructions and basic input and output system instructions.
14. (Original) The method for detecting and indicating faults on a computer motherboard as in claim 11, wherein said visual indicator is a light emitting diode.
15. (Original) The method for detecting and indicating faults on a computer motherboard as in claim 11, wherein said visual indicator is an external visual indicator.
16. (Original) The method for detecting and indicating faults on a computer motherboard as in claim 11, wherein said visual indicator is an internal visual indicator.
17. (Original) The method for detecting and indicating faults on a computer motherboard as in claim 15, further comprising the step of initiating an I/O port coupled to said microprocessor, said microprocessor providing signals to said external visual indicator via said I/O port when said computer motherboard is not initialized successfully.
18. (Original) The method for detecting and indicating faults on a computer motherboard as in claim 11, wherein said computer motherboard includes integrated circuits mounted on said computer motherboard.
19. (Currently Amended) An apparatus for detecting and indicating that there are no faults in a computer motherboard comprising:

means for receiving an initialization signal to start a computer system;
means for turning on a visual indicator when power is applied to said computer motherboard;
means for storing a plurality of diagnostic instructions for detecting faults on said computer motherboard;
means for, responsive to reception of said initialization signal, requesting and retrieving said plurality of diagnostic instructions ~~upon reception of an initialization signal~~; and means for executing said retrieved plurality of diagnostic instructions to initialize said computer motherboard so as to detect faults on said computer motherboard; and
means for turning off said visual indicator when no fault is found on said computer motherboard during execution of said diagnostic instructions.

20. (Currently Amended) The apparatus for detecting and indicating faults on a computer motherboard as in claim 19, further comprising:

means for initializing a memory subsystem; and
means for ~~activating a flash~~ flashing said indicator when a fault is found ~~on~~ in said memory subsystem.

21. (Original) The apparatus for detecting and indicating faults on a computer motherboard as in claim 19, wherein said visual indicator is an external visual indicator.

22. (Original) The apparatus for detecting and indicating faults on a computer motherboard as in claim 19, wherein said visual indicator is an internal visual indicator.

23. (Original) The apparatus for detecting and indicating faults on a computer motherboard as in claim 19, wherein said storing diagnostics means includes means for

storing power-on self-test diagnostic instructions and basic input and output system instructions.

24. (Original) The apparatus for detecting and indicating faults on a computer motherboard as in claim 19, wherein said visual indicator is a light emitting diode.

25. (Original) The apparatus for detecting and indicating faults on a computer motherboard as in claim 21, further comprising means for providing a signal to said visual indicator via an I/O port.

26. (Currently Amended) An apparatus for detecting and indicating faults on a computer motherboard and in a memory subsystem of a computer system comprising:

an external visual indicator;

a general I/O port coupled to said visual indicator;

a flash circuit coupled to said visual indicator for flashing said visual indicator;

a host bus for transmitting address and data signals;

a nonvolatile memory device ~~couple-coupled~~ to said host bus ~~having-storing~~ a plurality of diagnostic instructions ~~stored~~, said ~~a-plurality of diagnostic instructions~~ including power-on self-test diagnostic instructions for detecting faults in said computer motherboard and in a memory subsystem ~~and basic input and output system instructions~~;

a microprocessor ~~couple-coupled~~ to said host bus, to said general I/O port, and to said flash circuit, said microprocessor turning said visual indicator on through said general I/O port and ~~capable of request-requesting~~ and retrieving said plurality of diagnostic instructions upon reception of an initialization signal to start ~~a-said computer system, and-executing said retrieved-plurality of diagnostic instructions~~ for detecting faults in said computer motherboard prior to executing said diagnostic instructions for detecting faults in said memory subsystem,

turning said visual indicator off if no faults are detected in said computer motherboard, and activating said flash circuit if faults are detected in said memory subsystem;

~~a visual indicator coupled to said microprocessor being turned on when power is applied to said computer motherboard;~~

~~a general I/O port coupled to said microprocessor turning said visual indicator off when said computer motherboard is not initialized successfully, said microprocessor initializing said computer motherboard by executing said a plurality of diagnostic instructions; and a flash circuit coupled to said microprocessor flashing said visual indicator when a failure is found in a memory subsystem after said computer motherboard initialization.~~

27. (Currently Amended) The apparatus for detecting and indicating faults on a computer motherboard and in a memory subsystem of a computer system as in claim 26, wherein said external visual indicator is located on a panel of said computer system.

28. (Currently Amended) The apparatus for detecting and indicating faults on a computer motherboard and in a memory subsystem of a computer system as in claim 26, wherein said computer motherboard comprises an integrated circuit mounted on said computer motherboard.